
Brief Report

Responses to Civilian War Experiences: Predictors of Psychological Functioning and Coping

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This study investigated civilian war trauma in Central American refugees, focusing on the diagnosis of posttraumatic stress disorder (PTSD) as related to war experience and demographic characteristics. Sixty eight percent of the refugees met the diagnostic criteria for PTSD. Diagnosis was best predicted by number of war experiences, severity of war trauma and level of anxiety/depression. Higher numbers of war experiences predicted PTSD severity, as did involvement in the legalization process, parenthood, and being a citizen of El Salvador. In examining the PTSD symptom cluster scores, it was found that number of war experiences was a significant predictor in all clusters. These results are helpful in increasing our knowledge about the role of war experiences in civilian PTSD and the unique situation of the Central American refugees.

KEY WORDS: civilian war; Central American refugees; PTSD.

This study was undertaken to examine the war experiences, demographic characteristics and psychological functioning of the Central American refugee population. Emphasis was placed on the value of war experiences and demographic characteristics in predicting psychological functioning, specifically the diagnosis, severity and symptoms of posttraumatic stress disorder (PTSD).

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There have been few studies that have explored the trauma and psychological functioning of the Central American refugee population. Lopez (1988), in a case study of a young Salvadoran male, described the difficulty in making the diagnosis of PTSD due to the subject's fear of reporting individual war experiences and his tendency to somatize symptomology. Cervantes, DeSnyder, and Padilla (1988) compared psychological diagnoses in non-clinical groups of Central American versus Mexican immigrants. It was found that 50% of the Central American, as compared to 25% of the Mexican participants, met the criteria for PTSD. This study not only documented the widespread psychological effect of the Central American civil wars but also clearly differentiated the effects of war trauma from the effects of the immigration process alone.

Arroyo and Eth (1988), in a study of nonclinical Central American immigrant children, found that 90% had a diagnosable psychological disorder and 33% met full criteria for PTSD. Poor dietary, sanitary and medical care, along with separation from family members, predicted more intensive symptomology. Aron (1986) suggested that PTSD symptomology may increase as war victims enter the United States because they are often detained, jailed and retraumatized in court proceedings where they are forced to relive traumatic events in an unfamiliar and unsupportive environment.

Despite the fact that some preliminary knowledge has been gathered in the study of civilian war trauma in the unique population of Central American refugees, much more needs to be known. Due to the long standing, low intensity, guerrilla style of warfare, the experiences and symptomology of the Central American refugee must be studied separately in order to better understand etiology, treatment implications and prognosis in this underserved population.

The current study was undertaken to examine to the following hypotheses:

1. High numbers of war experiences and psychological symptoms would be reported (per Cervantes et al., 1988) due to the extensive nature of civil conflicts in Central America.

2. Higher numbers of war experiences, and increased time and severity of war related experience, were expected to distinguish between refugees with and without PTSD in accordance with Laufer, Brett, and Gallops (1985).

- 2A. PTSD symptom severity would also be related to higher number of war experiences, time in situation and severity of trauma (Friedman, Schneiderman, West, & Corson, 1986).

3. Positive postimmigration factors (employment, marriage, etc.) would reduce PTSD prevalence (Milgram, 1986).

War experience variables were also analyzed as to their differential predictive value on symptom cluster scores.

Method

Participants

Fifty Central American refugees between the ages of 17 and 65 who had been in the United States 3 years or less participated in the study. All lived in Arizona at the time of the interview. Subjects were recruited from two social service agencies specific to Central Americans by informing them that the investigators wanted to interview recent immigrants. Oral informed consent, in Spanish, was obtained before the interviews began.

Instruments

Anxiety Disorders Interview Schedule-Revised (ADIS-R). This is a structured diagnostic interview developed to permit differential diagnosis among DSM-III-R anxiety disorders and rule out psychosis, substance abuse, and mood disorders (DiNardo, O'Brien, Barlow, Waddell, & Blanchard, 1983). Blanchard, Gerardi, Kolb, and Barlow (1986) verified the ADIS-R as a valid measure of PTSD compared to a clinical psychiatric interview (inter-rater agreement 93%).

Hamilton Rating Scale of Depression (HRSD) and Hamilton Anxiety Rating Scale (HARS) (Hamilton, 1959; Hamilton, 1960). These two scales are embedded within the ADIS-R and yield general scores for both depression and anxiety.

War Experience Checklist. This is a 52-item checklist designed by the first author based on the specific experiences of Central American refugees. Both presence and perceived intensity of experiences were rated by participants. Participants were given an unweighted score based on number of war related experiences and a graded score based on subjective distress. Unweighted scores obtained an alpha of internal consistency of .91 (with standardized alpha = .90). Eight items were eliminated as they were never indicated by participants. Principal component factor analysis extracted 14 unique factors (primary factor eigen value = 9.10; 27% of variance).

Procedures

Participants were all interviewed and all instruments administered verbally in Spanish by the same bilingual researcher (DM) in a safe, comfortable and confidential setting. Subjects first answered demographic questions, participated in the ADIS-R, and answered questions on the War Experience Checklist. Interviews ranged from 1 to 4 hr.

Results

Demographics

The majority of subjects were men (86%) from Guatemala (56%) and unemployed (70%). Of the 25 who had entered the legalization process, all had been previously jailed from 1 day to 4 months in U.S. Immigration Detention Centers. The majority had less than 6 years of formal education, and were not officially married but had children. The vast majority had no military experience (70%) and were in the U.S. without family (58%). Lifetime history of anxiety disorders can be found in Table 1.

Mean age of the population was 27 ($SD = 8.7$). Subjects felt personally involved in the war situation for 7.9 years on average and mean number of war related incidents was 16. Hamilton Scale scores were in the normal range (HARS, $M = 15.6$, HRSD, $M = 11.2$).

It is noteworthy that 82% of this nonclinical sample met the lifetime criteria for at least one anxiety disorder. Nearly half (44%) reported a medical complaint. Only three subjects reported a war related injury.

Subjects with PTSD had slightly higher rates of anxiety disorder in their history (31%) than the non-PTSD subjects (25%) (non-significant). However, among those with a previous psychiatric history, 73% met the full criteria for lifetime PTSD.

Table 1. Lifetime Anxiety Diagnoses in a Sample of Central American Refugees

Variable		Frequency and % in Total Sample $N = 50$		Freq. and % in Non-PTSD Sample $n = 16$		Frequency and % in PTSD Sample $n = 34$	
Psychological Diagnostic Categories	PTSD	34	(68%)	0	(0%)	34	(100%)
	Simple Phobia	8	(16%)	1	(6%)	7	(21%)
	Generalized Anxiety Disorder	4	(8%)	1	(6%)	3	(9%)
	Social Phobia	6	(12%)	2	(13%)	4	(12%)
	Dysthymia	1	(2%)	1	(6%)	0	(0%)
	O-CD	1	(2%)	1	(6%)	0	(0%)
	No Anxiety Dx. >2 Dx.	9 7	(18%) (14%)	9 1	(56%) (6%)	0 6	(0%) (18%)
Variable		Frequency in PTSD Subjects $n = 34$				% of PTSD Subj.	
Comorbidity with PTSD	PTSD Alone	18				54%	
	PTSD + 1 Dx.	10				29%	
	PTSD + 2 Dx.	6				17%	

Diagnostic Prediction

In comparing the group identified as meeting criteria for PTSD to the group without PTSD the following differences (predictors) emerged: number of war experiences, $t(28) = 4.4, p < .001$, HARS score, $t(29) = 2.6, p < .013$, HRSD score, $t(32) = 2.8, p < .008$ and trauma severity, $t(29) = 3.7, p < .001$. In all cases, those with PTSD had higher scores. Years in war was not significant. Demographic variables (i.e., marital status, employment, etc.) did not differentiate the groups.

Severity Predictors

The data from the subgroup of 34 subjects who met the criteria for PTSD were analyzed to examine the predictive value of the war experience variables and demographic data on the severity of PTSD. War variables including number of war experiences, graded war experience score and years in the war situation were examined in a step-wise multiple regression procedure. Only the number of war experiences, $F(1,32) = 11.77, p < .0017$, was shown to make a unique contribution in explaining the variance in PTSD severity. The relation was positive in that the higher numbers of experiences predicted higher levels of PTSD.

Psychological functioning as reflected in the Hamilton depression and anxiety scores was examined in a bivariate analysis of variance. Depression, $t(32) = 2.27, p < .03$ was found to be significant predictor for level of PTSD, while, anxiety, $t(20) = 1.86, p < .07$, produced a trend.

Demographic data were analyzed first in a multivariate analysis of variance model to examine their predictive value on the level of PTSD severity. Legal status was found to have a significant relationship, $t(24) = 2.37, p < .03$, in that legal status (i.e., documentation) was predictive of higher levels of PTSD. It was also found that being a parent, $t(24) = 2.27, p < .03$, was associated with higher levels of PTSD. A nonsignificant trend indicated that citizens of El Salvador, $t(24) = 1.96, p < .07$, had higher levels of PTSD.

The same variables were included in a stepwise multiple regression procedure to determine which variables added a uniquely to explained variance. In a two-step regression procedure the variables found to account for the majority of the predictive value of the entire model were being a citizen of El Salvador, $F(1, 21) = 8.00, p < .01$, and having children, $F(1, 21) = 7.95, p < .008$.

We also examined the potential predictors of severity of each of the three PTSD symptom clusters. In each instance number of war experiences emerged as the only significant predictor ($p < .05$ or better).

Discussion

This study examined the war experiences and demographic characteristics of a Central American refugee sample as they related to anxiety disorders and symptoms, including a PTSD diagnosis. High numbers of both war experiences and PTSD were found in a civilian, non-treatment seeking sample, none of whom had received psychological care since their arrival in the United States. These data speak not only to the devastating effects of the Central American Civil Wars but the need for appropriate screening and treatment opportunities in this vulnerable population. It is also important to note the strength of these subjects who, despite both their experiences and symptomology, were adjusting and surviving in their daily lives without psychological or psychiatric services.

The prediction of PTSD was, as expected, highly related to number of war experiences and severity of war trauma. One factor that surprisingly was not indicative of PTSD was the length of time in a war situation. In American Vietnam combat veterans (Lund, Foy, Sipprelle, & Strachan, 1984) time in combat has been related to PTSD. However, in a civilian population, who must adjust to a long term, indirect war experience, this relationship becomes less clear. What is also interesting is the multitude of demographic variables that did not predict PTSD or PTSD severity such as marital status or employment.

These negative findings help support the literature which clearly distinguishes PTSD as a reactive process based on an external situation. Much scientific time and energy has been spent trying to distinguish what characteristics (personal or pre/post war environment) place a person "at risk" for a PTSD diagnosis. What has been clearly shown in this study and others is that it is the war experiences themselves that best predict the prognosis of their victim. It would now be best to direct our energies to distinguish what parts of the experience are most pathogenic and for what specific symptom sequelae.

In focusing on PTSD severity more interesting findings are noted. As expected, PTSD was predicted by number of war experiences; however, it was uncovered that the legalization process, which allows the individual temporary legal status and a work permit, is actually predictive of higher severity of PTSD. As indicated by Aron (1986), the process of legalization for Central Americans is complicated and traumatic. All of the subjects

involved in this process had been jailed; in addition they had the stress of trying to find legal representation, acquiring funds for bail and legal fees, and reliving their traumatic war experiences in strange and unsupportive environments as they were questioned by legal authorities. These findings might lead us to suggest changes within the legal systems which may be unequipped to understand the experiences, symptomology or needs of the civilian war victim.

Although this study is limited in number and scale, it is a stepping stone to gathering more information about civilian war victims and about the unique experiences and needs of the Central American refugee population.

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